National Marine Fisheries Service (NMFS) Determination May 31, 2011:

Old and Middle River Flow Management and San Joaquin River Inflow to Export Ratio [Action IV.2.3 (pages 74-70) and Action IV.2.1 (pages 67-72) of the 2011 Amendment to the NMFS Biological Opinion for the Long-Term Operations of the Central Valley Project and State Water Project (Opinion)]

Summary of Advice from the Delta Operations for Salmonids and Sturgeon (DOSS) group:

Background: DOSS confirmed that from 5/23/11 to 5/30/11, older juvenile Chinook loss density has been 0.0 fish/TAF and the combined wild steelhead loss density at the fish facilities is as provided in the following table. Neither the Chinook nor steelhead loss densities have been verified with DFG data. Due to the Holiday weekend, the normal salvage and loss data was not available.

SWP & CVP WILD STEELHEAD LOSS & LOSS DENSITY
05/23/2011 through 05/30/2011

Date	WILD STEELHEAD LOSS* (# fish)			Combined wild steelhead loss density Loss Density (fish/taf)
	SWP	CVP	Combined	
5/23/2011	0.00	0.00	0.00	0.00
5/24/2011	0.00	0.00	0.00	0.00
5/25/2011	17.32	0.00	17.32	3.49
5/26/2011	0.00	0.00	0.00	0.00
5/27/2011	51.96	0.00	51.96	10.64
5/28/2011	17.32	0.00	17.32	3.52
5/29/2011	0.00	0.00	0.00	0.00
5/30/2011	0.00	0.00	0.00	0.00

DWR-DES 5/31/2011
Preliminary, subject to revision
*SWP loss = salvage * 4.33, CVP loss = salvage * 0.68

The wild steelhead loss density of 10.64 fish/TAF, observed on 5/27/11, is above the first stage trigger of the 4th OMR trigger (8 fish/TAF).

DOSS advice for 5/31/11: DOSS advises that implementation of the 4:1 I:E ratio continue through Tuesday, 5/31/11 per to Action IV.2.1, and from 6/1/11 through 6/15/11 DOSS advises that a 1:1 I:E ratio be implemented per Action IV.2.2.

DOSS also advises NMFS and WOMT that the steelhead loss density observed on 5/27/11 triggered an action response under Action IV.2.3 that requires that OMR flow be no more negative than -3500 cfs for at least five days. Because OMR flows have been positive under implementation of the 4:1 I:E ratio, no operations changes were necessary over the weekend to

achieve this action response under Action IV.2.3. DOSS advises that Saturday, 5/28/11, be considered Day 1 of the action response and that the Projects operate such that OMR flows be no more negative than -3,500 cfs at least through Wednesday, 6/1/2011 (the 5th day of the action response). After Wednesday, the OMR limit may be relaxed if the combined steelhead loss density at the fish facilities is reported as less than 8 fish/TAF for at least 3 consecutive days (last 3 days of action) and if no other fish density trigger is met.

NMFS Determination

NMFS accepts the advice from DOSS and determines that meeting the following RPA requirements is consistent with the intended implementation of the NMFS RPA and sufficiently protective of listed species present in the Delta at this time:

Through 5/31/11: Implement the 4:1 I:E ratio per Action IV.2.1
From 6/1/11 to 6/15/11: Implement the 1:1 I:E ratio per Action IV.2.2
From 5/28/11 to at least 6/1/11: Beginning with the period from Saturday, 5/28/11 to Wednesday, 6/1/11, (the first full five day period of operating to the -3,500 cfs OMR limit), until there is some relaxation of the OMR flow requirement, the 5-day running average OMR shall be no more than 25% more negative than -3,500 cfs.

Following the 5-day period beginning on 5/28/11, the last three consecutive days in which the combined fish loss density is below an action trigger (and provided that the 5-day average OMR is no more negative 25% more negative than -3,500 cfs), the OMR flow limit can be relaxed, as follows.

- If the combined steelhead loss density drops to below 8 fish/TAF on 5/30, 5/31, and 6/1, the OMR flow limit may (as early as 6/2) be relaxed to no more negative than -5,000 cfs.
- If the combined steelhead loss density exceeds 8 fish/TAF (but is less than 12 fish/TAF) on 5/30, 5/31, and 6/1, the OMR flow limit of -3,500 cfs shall continue until there are 3 consecutive days of being below the first stage fish loss density trigger.